

The opinion in support of the decision being entered today was *not* written for publication in a law journal and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KENNETH L. JUSTICE

Appeal No. 2005-2701
Application No. 10/619,764
Technology Center 2800

ON BRIEF

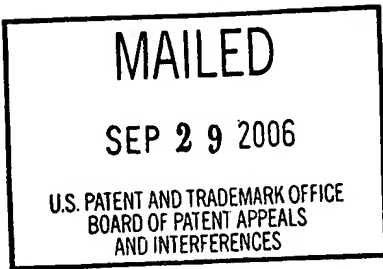
Before HAIRSTON, GROSS, and NAPPI, *Administrative Patent Judges*.
GROSS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 2, 7 through 21, 23 through 44, and 46 through 64, which are all of the claims pending in this application. As the examiner has indicated that claims 18 through 20, 42, and 43 are now allowable, only claims 1, 2, 7 through 17, 21, 23 through 41, 44, and 46 through 64 remain before us on appeal.

Appellant's invention relates to a welder cable coupler on a welder housing. Claim 21 is illustrative of the claimed invention, and it reads as follows:

21. A welder cable coupler on a welder housing or wire feeder for conveniently connecting a welder cable to said welding housing or wire feeder comprising a coupler having a coupling jacket which includes an electrical coupling cavity having a plurality of electrical connectors positioned therein and a coupling sleeve rotatably positioned at least partially about said coupling jacket, said coupling jacket designed to be at least partially telescopically received in a cable connection sleeve of said welder cable, said electrical connectors in said coupling cavity designed to be



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electrically connected to corresponding electrical connectors in said cable connection sleeve at least when said coupling jacket is partially telescopically received in said cable connection sleeve, said coupling sleeve including a joining cavity having a connection member designed to at least partially engage an outer surface of said cable connection sleeve after a majority of said electrical coupling cavity is telescopically inserted in said cable connection sleeve and said electrical connector in said coupling cavity is at least partially electrically connected to the corresponding electrical connector in said cable connection sleeve.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Chow	3,680,034	Jul. 25, 1972
Glover	3,824,526	Jul. 16, 1974
Herrmann	4,090,759	May 23, 1978
Liao	5,308,259	May 03, 1994
Ellis	5,439,386	Aug. 08, 1995
Haag	6,358,076	Mar. 19, 2002

(Filed Feb. 27, 1998)

Appellant's admitted prior art, Figures 1-3, and the corresponding description in the specification. (APA)

Claims 1, 2, 7, 14, 16, 21, and 23 stand rejected under 35 U.S.C. § 103 as being unpatentable over APA in view of Ellis, Liao, Haag, and Chow.

Claim 8 through 10 stand rejected under 35 U.S.C. § 103 as being unpatentable over APA in view of Ellis, Liao, Haag, Chow, and Herrmann.

Claim 11 stands rejected under 35 U.S.C. § 103 as being unpatentable over APA in view of Ellis, Liao, Haag, Chow, and Glover.

Claims 12, 13, 15, 17, 20, 23 through 41, and 44 through 64¹ stand rejected under 35 U.S.C. § 103 as being unpatentable over APA in view of Ellis, Liao, Haag, Chow, Herrmann, and Glover.

Reference is made to the Examiner's Answer (mailed May 4, 2005) for the examiner's complete reasoning in support of the rejections, and to appellant's Brief (filed February 22, 2005) and Reply Brief (filed May 26, 2005) for appellant's arguments thereagainst.

¹ We note that the examiner has included claim 45 in the rejections, although claim 45 has been canceled by appellant.

OPINION

We have carefully considered the claims, the applied prior art references, and the respective positions articulated by appellant and the examiner. As a consequence of our review, we will affirm the obviousness rejections of claims 1, 2, 14, 16, 21, 23 through 31, 38, 40, 44, 46 through 48, 51, 53, 55, 57, 58, and 60, but reverse the obviousness rejections of claims 7 through 13, 15, 17, 32 through 37, 39, 41, 49, 50, 52, 54, 56, 59 and 61 through 64.

Regarding independent claim 1, the examiner applies APA in view of Ellis, Liao, Haag, and Chow. The examiner admits (Answer, page 3) that APA fails to disclose that the joining cavity engages the outer threaded surface of the cable connection sleeve after a majority of the electrical coupling cavity is telescopically inserted in the cable connection sleeve. The examiner asserts (Answer, pages 3-4) that Ellis discloses that to allow quicker engaging and disengaging of the mating parts, locking member 100 should be engaged with the outer threaded surface 34 of a cable connection sleeve after mating members 80 and 40 are fully engaged and the connectors 128 and 48 are connected. The examiner further indicates (Answer, page 4) that APA fails to teach the claimed gripping surface of nodes in a star shape. The examiner asserts (Answer, page 4) that Liao's ribs 21 (and the corresponding disclosure at column, 2, lines 40-45), Haag's finger tabs 72 (and the corresponding disclosure at column 6, lines 65-67), and Chow's gripping rings are examples of nodes in a star shape used for facilitating manual rotation.

Appellant argues (Brief, pages 9-12) that Ellis is non-analogous art. Appellant contends (Brief, page 10) that Ellis has nothing to do with welding, and, therefore, is not within the same field of endeavor as appellant's invention. Further, appellant asserts (Brief, pages 10-11) that the problems associated with the coaxial cable as in Ellis differ from the problems associated with the welding cable as in appellant's invention, and that Ellis, therefore, is not pertinent to the problem solved by appellant. We disagree. One problem solved by Ellis is the ability to quickly and easily engage and disengage two portions of a connector. (See Ellis, Abstract and column 1, lines 43-51.) Though the

connector may be a different type of connector than that claimed by appellant, the problem is the same as that solved by appellant (See Specification, page 2, second paragraph). Thus, we find that Ellis is analogous art, as it is directed to solving the same problem as appellant.

Appellant contends (Brief, pages 12-15) that Liao and Chow are non-analogous art. In particular, appellant argues (Brief, page 12) that Liao is directed to a communication plug, not to welding, and, thus, is not in the same field of endeavor as appellant's invention, and that the problem solved by Liao is to make a low cost plug which is light weight and insulated, which differs from problems associated with welding cables. Similarly, appellant asserts (Brief, page 14) that Chow has nothing to do with welding, and, therefore, neither is in the same field of endeavor nor is directed to the same problems solved by appellant. Again we disagree. Although Liao and Chow may not be in the same field of endeavor, both use gripping surfaces like those recited by appellant for the same purpose as appellant, for facilitating manual rotation. Thus, the problem solved by using the particular element relied upon by the examiner is the same problem solved by appellant by using the claimed nodes in a star shape. Therefore, the problem solved is the same, and the two references are analogous art.

Appellant appears to argue (Brief, pages 23-24) that because Ellis is directed to an RF coupler rather than to a welder cable coupler, the teachings cannot apply to welder cable couplers. Further, appellant suggests (Brief, page 24) that because Ellis discloses a single wire connection rather than multiple wire connections, and because the other structure of Ellis is not identical to that recited in the claims, that Ellis cannot provide the teaching applied by the examiner. Last, appellant (Brief, page 25) asserts that the examiner has used impermissible hindsight in applying Ellis because APA would have to be redesigned and repositioned to achieve the advantages cited by the examiner, and only appellant's specification discloses such a redesign. We disagree with appellant. The court in *Joy Technologies Inc. v. Quigg*, 14 USPQ2d 1432, 1441, conveyed that

[i]n *In re Sneed*, 710 F.2d 1544, 1550, 218 USPQ 385, 389 (Fed. Cir. 1983), the court stated ". . . that it is not necessary that the inventions of the references be physically combinable to render obvious the invention under review." *See also In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981) ("The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.")

Thus, the question is whether Ellis teaches or suggests a modification of APA, not whether the invention of Ellis may be bodily incorporated into APA. We find that the answer to the question is yes. We find that Ellis suggests that the coupling sleeve, APA's equivalent to Ellis's locking element, should not be engaged until the electrical coupling cavity is inserted into the cable connection sleeve such that electrical connection is made by the electrical connectors so that the connection can be made quicker and more easily. As to the modifications necessary to implement the teachings of Ellis, it would have been within the level of the skilled artisan to do so. The level of the skilled artisan should not be underestimated. *See In re Sovish*, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985).

Regarding the nodes on the gripping element, appellant argues (Brief, page 26) that "[t]here is no disclosure from the APA or Ellis' 386 that there is a need for a star shaped grip to increase the speed at which a cable can be connected or disconnected." However, the examiner applied Haag, Liao, and Chow for teachings to use a star shaped grip. Appellant contends (Brief, page 26) that the examiner has failed to point to any portions of the three references that would motivate one skilled in the art to use nodes in a star shaped configuration on the coupling sleeve. However, the examiner pointed to particular passages in each reference that suggest finger holds around an element for easier manual rotation. Thus, it would have been obvious to one skilled in the art to use nodes in a star shape configuration around the coupling sleeve, since the coupling sleeve is manually rotated. Accordingly, we are unpersuaded by appellant's argument regarding claim 1 and the claims grouped therewith by appellant on page 7 of the Brief, claims 2, 14, and 16. Therefore, we will sustain the rejection of claims 1, 2, 14, and 16.

As to claim 21, appellant (Brief, pages 27-29) repeats the arguments made for claim 1 which we found to be unpersuasive. Appellant further indicates (Brief, page 29) that it is unclear why Haag, Liao, and Chow were applied against claim 21, since claim 21 does not include any limitation with respect to the gripping elements. We agree, and find Haag, Liao, and Chow merely cumulative. Since appellant fails to present any additional arguments for claim 21, we will sustain the obviousness rejection of claim 21 and the claims grouped therewith by appellant on page 7 of the Brief, claims 23, 24, 27, 29, 38, and 40.

Claim 7 recites that the threads in the joining cavity of the coupling sleeve are spaced from the receiving end of the joining cavity. The examiner (Answer, pages 4-5 and 10) directs our attention to D6 in Figure 4 of Ellis, stating that it would have been obvious to space the threads from the end of the joining cavity as shown in Ellis “to prevent damage to the threads and ensure that the threaded mating parts were properly oriented before engaging the mating threads, such motivation being known in the art.” The examiner has pointed to no teaching as to why one would leave a space in front of the threads, and we find none. Thus, there is no evidence in the record to support the examiner’s assertion. A factual inquiry whether to modify a reference must be based on objective evidence of record, not merely conclusionary statements of the examiner. *See In re Lee*, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002). Thus, the examiner has failed to establish a *prima facie* case of obviousness, and we cannot sustain the rejection of claim 7.

Claim 9 depends from claim 7, claim 8 includes the same limitation as claim 7, and claim 10 depends from claim 8. The examiner adds Herrmann to the primary combination, but, as pointed out by appellant (Brief, pages 32-33) directs us to nothing in Herrmann that would cure the deficiency noted *supra*. Therefore, we cannot sustain the rejection of claims 8 through 10. Similarly, claims 11 and 12 depend from claim 7 (12 through claim 9), and claims 13, 15, and 17 depend from claim 8 (through claims 10, 13, and 15, respectively). The examiner adds Glover to the primary combination for claim 11, and both Herrmann and Glover for claims 12, 13, 15, and 17, but points to

nothing in either Herrmann or Glover that would overcome the above-noted shortcoming. Thus, we cannot sustain the rejections of claims 11 through 13, 15 and 17.

Regarding claims 25 and 26, the examiner adds Herrmann and Glover to the primary combination which was used to reject independent claim 21. However, it is unclear how claims 25 and 26 further limit claim 21 to require the additional references. Appellant argues (Brief, page 43) that claims 25 and 26 are non-obvious for the same reasons set forth supporting the non-obviousness of claims 1 and 21. We found the above-noted arguments unpersuasive. Appellant further argues (Brief, page 43) that it would be mere speculation as to whether the couplers in Glover and Herrmann satisfy the limitations of claims 25 and 26. However, it would appear that Glover and Herrmann are merely cumulative, as the limitations of claims 25 and 26 were already accounted for in the rejection of claims 1 and 21. Therefore, we will sustain the rejection of claims 25 and 26 and of claims 28 and 30, which appellant groups with 26 on page 7 of the Brief.

Claim 31 adds to claim 21 that the gripping member on the coupling sleeve includes nodes in a star shape configuration. We found *supra* that Liao, Haag, and Chow suggest this limitation. Appellant (Brief, page 44) refers to the arguments against the rejection of claim 1, which we have found unpersuasive, and argues that Herrmann and Glover fail to disclose the limitation of claim 31. However, as we found sufficient disclosure in Liao, Haag, and Chow for the limitation of claim 31, Herrmann and Glover are merely cumulative. Therefore, we will sustain the rejection of claim 31.

Claims 32 and 33 recite the same limitation as claim 7, for which limitation we found no evidence in the primary combination. The examiner rejects claims 32 and 33 over the primary combination in view of Herrmann and Glover. However, as with claims 8 through 13, 15, and 17, the examiner has pointed to nothing in Herrmann or Glover that would have suggested to the skilled artisan to space the threads from the end of the joining cavity. Accordingly, we cannot sustain the rejection of claims 32, 33, or claims 34 through 37, 39 and 41, which depend either directly or indirectly from claims 32 and 33.

With regard to claim 44, appellant (Brief, pages 37-39) repeats the arguments made against the rejection of claim 1, which arguments we found unpersuasive. The examiner further includes Herrmann and Glover in the rejection of claim 44, but provides no explanation as to why. The examiner states (Answer, pages 5 and 10) that Herrmann is relied upon for disclosing a beveled surface at the receiving end of a joining cavity, and that Glover is relied upon for a majority of an electrical coupling cavity extending outwardly from a receiving end of a joining cavity. Since, as pointed out by appellant (Brief, pages 39-40), claim 44 includes neither of these limitations, we find that Herrmann and Glover are merely cumulative, and appellant's arguments regarding Herrmann and Glover with respect to claim 44 are moot. Since appellant presents no further arguments against the rejection of claim 44, we will sustain the obviousness rejection of claim 44 and of claims 46, 51, 53, 55, 58, and 60, which were grouped therewith by appellant at page 8 of the Brief.

For claims 47 and 48, appellant (Brief, page 46) refers to the arguments presented for claims 1, 25, and 26, which we found unpersuasive, *supra*. Accordingly, we will sustain the obviousness rejection of claims 47 and 48.

Claims 49 and 50 recite that the receiving end of the joining cavity has a beveled surface and that the connection member (or threads) is positioned rearwardly of the beveled surface. In other words, claims 49 and 50 recite that the threads are spaced from the receiving end of the joining cavity, as recited in claim 7, and that the portion between the end and the threads is beveled. With respect to the spacing, the examiner relied upon Ellis, and we found no evidence in Ellis to support the examiner's motivation to combine. Further, with respect to the beveled edge, the examiner asserts (Answer, page 5) that Herrmann shows a beveled edge in Figure 5 and that it would have been obvious to do so in APA as modified by the other references "to facilitate mating of the mating sleeves, as is well known in the art." Again, the examiner has made conclusionary statements without objective evidence of record. *See Lee*. Thus, we cannot sustain the rejection of claims 49 and 50, nor of claims 52, 54, 56, 59, 61, 63, and 64, which depend therefrom.

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Claim 57 includes the limitation of the gripping member having nodes in the shape of a star. Appellant (Brief, page 47) refers to the arguments made with respect to claim 1, which arguments we found unpersuasive. Therefore, we will sustain the rejection of claim 57.

Regarding claims 62 and 63, the limitation recited is the same as that recited in claims 18 through 20, 42, and 43. Appellant (Brief, page 48) directs our attention to the arguments presented for claims 18 through 20, 42, and 43. The examiner indicates at page 10 of the Answer that the arguments regarding claims 18 through 20, 42, and 43 were persuasive. Accordingly, the examiner has withdrawn the rejection against those claims. Since the examiner provides no reason why claims 62 and 63 should be treated differently from claims 18 through 20, 42, and 43, we will not sustain the rejection of claims 62 and 63.

CONCLUSION

The decision of the examiner rejecting claims 1, 2, 7 through 17, 21, 23 through 41, 44, and 46 through 64 under 35 U.S.C. § 103 is affirmed with respect to claims 1, 2, 14, 16, 21, 23 through 31, 38, 40, 44, 46 through 48, 51, 53, 55, 57, 58, and 60, and reversed with respect to claims 7 through 13, 15, 17, 32 through 37, 39, 41, 49, 50, 52, 54, 56, 59 and 61 through 64. Thus, the decision of the examiner is affirmed-in-part.

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No time period for taking any subsequent action in connection with this appeal
may be extended under 37 CFR § 1.136(a)(1)(iv).

AFFIRMED-IN-PART



KENNETH W. HAIRSTON
Administrative Patent Judge



ANITA PELLMAN GROSS
Administrative Patent Judge



ROBERT E. NAPPI
Administrative Patent Judge

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FAY SHARPE / LINCOLN
1100 SUPERIOR AVENUE
SEVENTH FLOOR
CLEVELAND, OH 44114